CONCEPT AND ISSUES PAPER

PEOPLE AND COMMON PROPERTY RESOURCES IN LAND

Robert Chambers
The Ford Foundation
New Delhi

Prepared for
Staff Meeting
Rural Poverty and Resources Program
The Ford Foundation
Cairo, May 9-13, 1983

PEOPLE AND COMMON PROPERTY RESOURCES IN LAND

PEOPLE AND COMMON PROPERTY RESOURCES IN LAND

Purpose and Definitions

The purpose of this paper is to examine the current significance and future potential of common property resources (CPRs) in land, and to explore implications for the Ford Foundation.

'Common property resources in land' refers to land and its plant and animal life where these are not private property resources (PPRs) which are those to which individuals, families or companies have exclusive rights of use. In this paper CPRs do not include groundwater[1], although rights to land usually entail rights to the water under it; groundwater is another CPR with its own characteristics. CPRs in land include not just the soil and land surface, but also what is on the land - forests, trees and their products, grazing and browse, bushes, reeds, grasses, ponds, streams, fish, wildlife and the like. They can be divided roughly into three categories - open, public and community. Open CPRs are those to which, legally or de facto, there is open access to all comers, and are typically found in frontier situations. Public CPRs are those which have been appropriated by the State and include protected forests, government plantations, parks and some roadsides and canal banks. Community CPRs are those where members of a community or

---

1. Groundwater is being dealt with in Roberto Lenton's paper.

social group, whether by customary usage or by formal law, have rights of access and use, and include the grazing lands of most of the world's nomadic and transhumant pastoralists and most of what is known as common land or village land. Much land in the rural South is in transition from CPR to PPR status, not least that under shifting cultivation. Land undergoing this transition is included in the scope of this paper. Agro-forestry refers to the interactions of trees with crops, pasture, and/or livestock over space and time, mainly on private property land.

CPR Management: Theory and Practice

CPR management and mismanagement have in recent years provided economists, game theorists and some ordinary mortals with a happy common hunting ground for theory, with no signs yet of depletion through some of degradation. A central and useful postulate was Garrett Hardin's[1] 'tragedy of the commons', describing how free competition between individuals, families, groups and organisations adversely affects CPRs. According to this analysis, it is in the private interest of each actor to maximise short-term benefits from the commons, although all would likely be better off in the longer -term if all stinted. If only some stint, 'free riders' share the benefits without accepting the costs of stinting, and thereby undermine the arrangements on which

---

1. Garrett Hardin 'The Tragedy of the Commons' in Garrett Hardin and John Baden, eds., Managing the Commons, W. H. Freeman and Co., San Francisco, 1977, pp. 16-30.

restraint is based.

Less usefully, in my view, analogies are drawn with game situations[1]. These seem to shed more light on the intellectual predilections of the authors than on the real world. Game situations are clear, clean and logical; the real world is messy, dirty and muddled. Practical approaches are more likely to be found from hard experience than through abstract analysis.

From some of the experience with CPRs in grazing, especially in Africa, and with CPRs in forests, especially in Asia,[2] there seem to be four main institutional approaches to CPR management:

1. free-for-all
2. management by the State
3. management by communities or groups
4. management by the family.

The pros and cons of these depend on people's wishes, on other local circumstances, and on the resources involved. As they also depend on the ideology of the observer, some of the values and criteria underlying this paper will be made explicit.

---

1. See for example Carlisle Ford Runge 'Common Property Externalities: Isolation, Assurance, and Resource Depletion in a Traditional Grazing Context', American Journal of Agricultural Economics, November 1981, pp. 595-606. Runge considers problems of the commons to be more like 'battle of the sexes' than like 'the prisoners' dilemma'.
2. Some of the best research and documentation is for communal grazing in Botswana and for social forestry in the Philippines. As good summaries and introductions see The Management of Communal Grazing in Botswana, Discussion Paper, Evaluation Unit, Range Management Centre, Ramatlabama, Botswana, March 1981, and Perla Q. Makil et al. Toward a Social-Forestry Oriented Policy: the Philippine Experience, Institute of Philippine Culture, Ateneo de Manila University, Quezon City, 1982.

Values and Criteria

i. poor people first. In the recent past, the values dominating some of the discussion of CPRs have been elitist, conservationist, and narrowly professional. In part this has been a projection into the rural South of concerns in the affluent North to reduce pollution and to improve recreation. Urban-based and urban-biased professionals have started with soils, forests, grazing or wildlife, and have found it easy to blame the rural poor for the erosion, degradation, denudation, overstocking, over-exploitation, and/poaching which they observe. Their values are reflected in the draft Indian Forest Bill which put conservation first, then production, then recreation for the urban elite, and then tacked onto the end tribal people's needs for grazing and 'minor' forest produce. Poor people came last. In the words of an RGA from the Philippines, the tendency has been 'to view public lands as a reserve rather than a resource, people as intruders or squatters rather than as residents with acknowledged rights, and the (Government's) role as custodial rather than developmental'. The point of departure of this paper (and of actions to date of the Foundation) is different. The premiss is that the environment, and CPRs, exist for people, and not people for the environment; and that among people, the poor come first.

ii. livelihood-intensity and carrying capacity. This orientation affects the criteria used in considering the management of CPRs. Resource use is nowadays often assessed in terms of productivity, equity and environmental stability or sustainability. Putting poor people first implies that these are means, not ends, towards enabling them to gain more of what they want and need. If some concept of well-being is an overarching goal, livelihood is a major component to which poor people attach high priority. 'Livelihood' here is used in some sense of adequate and secure flows and stocks of food and income round the year. In countries with severe population pressure and poverty, livelihood intensity of resource use then becomes a major, or the major, criterion in management, with productivity, equity and sustainability as means towards it. The same criterion can be expressed in terms of carrying capacity. The carrying capacity of a resource in this context is its sustainable capacity to support people with secure and adequate livelihoods.

Population and CPRs

The significance of livelihood-intensity and carrying capacity as criteria is indicated by anticipated population growth in countries in which the Foundation has concentrated its programmes. The lull in concern for population is exceedingly dangerous. In both India and Sub-Saharan Africa, there are expected to be some 300 million extra

people for whom food and income will be needed between 1980 and 2000, and this on top of the present situation in which hundreds of millions already live and die in conditions far short of any reasonable definition of human decency. Recent events in Nigeria and Assam may

Table: Projected Population Increases in Countries of Major Ford Foundation Involvement, 1980 - 2000

	(millions) 1980	2000	Percentage increase 1980-2000	Percentage rural 1980	Livelihoods required by 2000 to support an additional (millions) * = rounded
India	673	994	48	78	320*
Sub-Saharan Africa (includes Sudan)	353	639	81	79	290*
Indonesia	147	216	47	80	69
Brazil	119	177	49	35	58
Bangladesh	89	141	58	89	52
Mexico	70	115	64	33	35
Philippines	49	77	57	64	28
Egypt	40	60	50	55	20
Peru	17	27	59	33	10
Nepal	15	22	47	95	7
Sri Lanka	15	21	40	73	6
(China	977	1245	27	87	270*)

Sources: World Bank, Accelerated Development in Sub-Saharan Africa, 1981, p. 112-3 and World Development Report 1982, pp. 166-7 and 172-3.

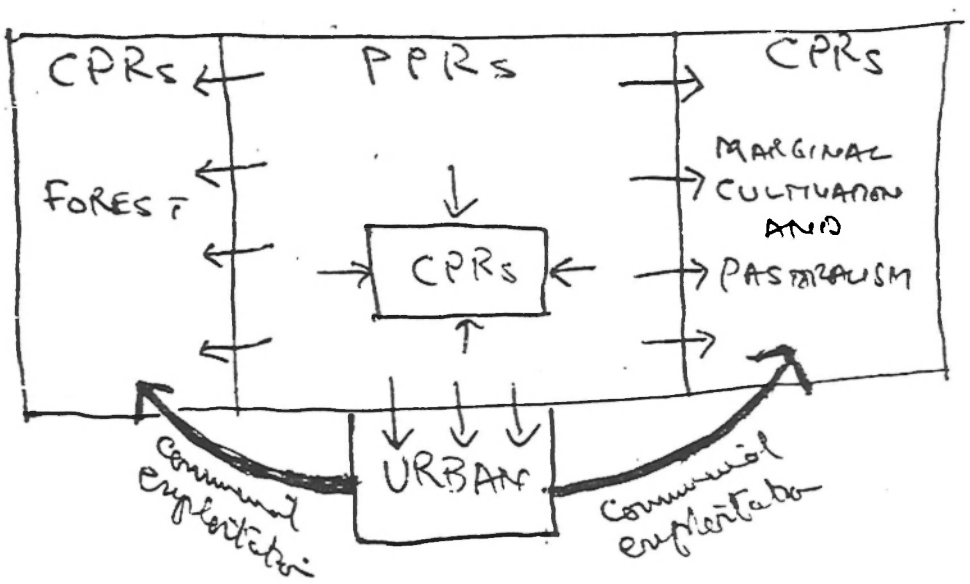
be early warnings of the consequences for immigrants and minorities of increasingly bitter competition for livelihoods, and the next decade may see more such tragedies in which poor people are driven as refugees back to the home environments from which they were earlier driven by want. The figures in the table speak for themselves. The situation in Africa, with its relative lack of irrigation potential, is especially grave.

The crisis of livelihoods can be seen more sharply from an historical perspective. Much of the accelerating population growth of the past ten thousand years has been accommodated through colonisation and appropriation of open CPRs by communities to become community CPRs, and then of these by individual families and companies to become PPRs. Increasing proportions of the population have moved to towns especially in the North and in Latin America, but much less so in Africa and Asia where some 4/5ths of the population are rural and rural populations continue and will continue to rise sharply. There is much variety, but quite often the pattern is as in the diagram, with the best agricultural land already appropriated as PPRs, and migration into fragile and marginal environments - up into forests and down into savannahs and less fertile lands with variously low rainfall, poor soils, flooding, and unhealthy conditions. Those 'internal' CPRs which remain within cultivated PPR areas are also subject to pressures of settlement and use. Commercial interests also compete for CPRs of forest timber and of pasture and are often favoured by Governments.

Diagram: Migration and Pressures on CPRs

Higher altitude
Higher rainfall

Lower altitude
Lower rainfall



→ = migration and use by poor people

To mitigate these problems, two major thrusts which the Foundation supports are livelihood-intensification of agriculture on PPRs (especially farming systems work in Africa, and irrigation in Asia), and the generation of rural non-agricultural employment. Important as these are, the argument below is that CPRs have been relatively neglected in rural development thinking and programmes, and are more important for the poor and have somewhat more potential for them than we have realised.

Four Propositions

The argument rests on four propositions:

i. those who depend on CPRs include many of the poorest including the landless, marginal farmers, minorities and groups who are politically weak.

Most obviously, many forest dwellers and pastoralists are of low status and politically weak: the five million upland dwellers of the Philippines, largely tribal minorities, the 40 million tribals in India, the forest dwellers of Africa, and many of the peoples of the Amazon basin all depend, or have depended, on forests, and tend to be much less educated, and less able to defend their interests than others; and nomadic and transhumant pastoralists are often looked down on by settled agriculturalists, and have a way of life which impedes effective political organisation to defend their interests.

Less obviously, CPRs are essential for the livelihoods of many of the poorest in areas of settled agriculture. For those who are struggling to stitch together a rural livelihood, CPRs provide sources of food and income in many different ways - grazing, grass, bamboos, reeds, firewood, fish, wild animals, fruits, berries, nuts, insects, honey, medicinal plants, and a host of other products which are consumed or sold. Many of the poorest have work on their small plots of land, or as labourers, for parts of the year, but not enough for a year-round livelihood. For them, the seasonal increment from CPRs is often critical, and especially so as a fall back in bad years.

ii. most[1] CPRs are being depleted, often with loss of long-term productivity

Most obviously, forests are being felled, fragile marginal land cultivated, and pastoral areas overgrazed. The forest cover of the Philippines declined from over 15 million hectares in 1946 to less than 7 in 1981. A 1982 study[2] gives the following figures:

	Percentage deforestation per year	Number of years to total depletion at current rate
Philippines	7	14
Sri Lanka	5	19
Thailand	5	21
Nepal	3	40
Indonesia	2	57

Figures for India are not available.

---

1. Exceptions include areas which have been depopulated because of disaster, which generate few livelihoods because they are protected by government, which are as yet not colonised, as with parts of Indonesia, and which are under effective sustainable management.

2. Review and Appraisal of Environmental Situation in the ESCAP Region, United Nations, Economic and Social Commission on Asia and the Pacific, Bangkok, 1982, p. 14, cited in Benjamin Bernales et al, Social Forestry Projects in the Philippines: An Inventory and Listing of Communal Fore sts and Pastures, Integrated Research Center, De La Salle University, Manila, 1982, page 1. It is not indicated whether these figures are net of replanting. This is symptomatic of the vagueness of most of the figures used in discussions of forestry.

Erosion, silting and flooding resulting from the exploitation of steep uplands as in Nepal are well-known serious problems. Cultivation spreading out into low rainfall areas like lower Ukambani in Kenya is often at the cost of degradation. The carrying capacity of pastoralists' lands is almost everywhere declining, the Sahel being the best known example of a phenomenon to be found in many countries of the South. The 'internal' CPRs are also under pressure, often declining in productivity. And many of these changes may be irreversible, without the possibility, short of massive physical intervention or geological time, of recovery to previous potential.

iii. the major villains are the rich, the main victims the poor

Starting by considering population pressure, migration, shifting cultivation with shortening fallows, and the like, the comfortable conclusion is that it is the poor who are destroying their environment. There is some truth in this, as desperate people fighting for livelihoods cannot take the long view; and the prescriptions that follow from this conclusion are paternalist and custodial. 'The only thing to do about the Himalayas', I have been told, 'is to move out 15 million people'.

But much of the truth is less palatable. It is perhaps no coincidence that figures are hard to come by for the scale of commercial deforestation. It is often the less poor and the rich who appropriate and

despoil the commons, protected by their power. The English jingle from the time of the enclosures had it that

> 'They clap in gaol the man or woman
> Who steals the goose from off the common;
> But let the bigger knave go loose
> Who steals the common from the goose'

In Bangladesh, as recorded in The Net[1], villagers who took headloads of firewood from the forest were arrested, kept without food, and blackmailed into paying bribes for their release, while contractors felled and sold trees with impunity. A modern verse might go

> They clap in gaol, with threats most cruel,
> Poor folk who gather wood for fuel;
> But let rich loggers go scot free
> Who fell and steal the living tree.

In India, it is contractors, in league with politicians and bureaucrats who do not lose financially in the process, who are felling the forests, resisted here and there by courageous people like those of the Chipko Movement defending the trees which provide their livelihoods. It is the poor here, not the rich, who are the conservationists. In Kenya, the spectacular profits of the charcoal industry which destroyed so much forest and bush were said to be concentrated in a few hands. 'Small' people wish to preserve their traditional livelihoods, but 'big men' with machinery for felling trees and lorries for taking them away, or with large herds and money for boreholes, or with big boats to catch fish,

---

1. The Net: Power Structure in Ten Villages, Bangladesh Rural Advancement Committee, 66 Mohankhali Commercial Area, Dacca 12, Bangladesh, 1980, pp. 65-76.

capture and decimate the resources on which those livelihoods are based. But it is more convenient to blame the victim, and safer too when the villain is rich and powerful and the victim poor and powerless.

iv. <u>the importance of CPRs for the poor is underperceived and their potential for livelihood-intensive development underestimated</u>

Professionals and policy-makers underperceive the importance of CPRs for the poor. Spatially, CPRs tend to be remote (that is, remote from where professionals and policy-makers start from), with bad communications and in difficult terrain, or away from the centre of the village and areas of cultivation. Seasonally, CPRs' importance is often concentrated in certain times of the year and so easily missed by a visitor. Politically, it is inconvenient to recognise the extent to which commercial exploitation is taking land, trees, pasture or fish from rural people. Professionally, it is more rewarding to work with PPRs and the better off than with CPRs and the poor. PPRs attract far larger sums for research[1] and carry higher prestige. It is also easier to show identifiable results as a plant-breeder for irrigated PPR conditions than as, say, a person conducting pasture research in an arid CPR environment. Finally, there are many class and professional biases (see appendix) against recognising and working with what matters to the poor.

---

1. In the CGIAR system, for example, for all the high quality work that has been done, there has been little attention to CPRs, exceptions being ILCA's work on nomadic pastoralism and the work of N.S. Jodha at ICRISAT.

Professionals and policy-makers also underestimate the potential of CPRs for generating and sustaining livelihoods for poor people. They tend not to recognise the significance of the scale of CPRs: in India, for example, while agricultural lands are some 143 million hectares, the area of CPRs covered by forests, permanent pastures and cultivable waste is still some 100 million hectares. When they do observe CPRs, they often see them in a degraded condition, suffering from the tragedy of the commons, for instance after deforestation, carrying only shallow rooting vegetation although they still have potential for trees. They see the great difficulties of community management of CPRs. Their orientation tends to be custodial, demanding protection, control, discipline, and policing as 'the only solution'. The mental set is for conservation and for commercial management, and against people.

The true potential of CPRs for livelihood-intensive development is still a matter for speculation. It has been underresearched. Forests guarded by non-developmental Forest Departments have been protected by habits of thought and non-thought from being appraised for human settlement, yet forest land may present opportunities to settle tens of millions of families. The search for stable systems of smallholder agro-forestry i. for new settlement on forest land, ii. to replace shifting cultivation, iii. in areas of low rainfall, and iv. for silvi-pastoral systems, has received far less attention than it deserves. The energy

crisis has been treated as a problem for the rich not as an opportunity for the poor. Yet CPRs with trees or tree crops, and agro-forestry smallholdings are energy farms, and the high costs of energy[1] and wood promise stable stocks of wealth and incomes for the poor. Disciplinary specialisation has further impeded exploration of synergistic interactions of trees with crops, livestock and fish[2].

Some Contributions of the Ford Foundation

What follows is not a comprehensive review of Foundation actions in the field of CPRs and land management, but is based on some examples, mainly from India and the Philippines, where five main types of action are evident:

i. exploratory research and monitoring. The Foundation has sponsored research on and monitoring of CPRs. Most of this has been concerned with the use of forests and forest land, such as shifting cultivation in the Philippines, remote sensing and research on areas for transmigration in Indonesia, research on the significance of minor forest products for poor people and surveys of CPRs and their use at village level in India. This heading also includes ecological and socio-economic studies of the Egyptian western coastal desert.

---

1. I doubt whether the decline in oil prices will feed through to halt or reverse the rise in the real cost of wood in most countries of the South.

2. See pages 22 - 24 below.

ii. training and education. The Foundation has supported actions ranging from university courses in environmental subjects and natural resource management, as at the University of Los Banos in the Philippines and Bogor Agricultural University in Indonesia, to training community groups for community forestry, as with CETAMEX in Mexico.

iii. new approaches in community management. Innovative NGOs have been supported in social forestry. The Foundation has pioneered in the complex and difficult area of community management of CPRs. The Sukhomajri project in India presents an example of interlocking innovations which suggest a crucial hypothesis: that equity in access and use of CPRs is not just desirable, but also a condition for success in managing community CPRs. The well-documented exploration and development of participatory approaches to Uplands Development in the Philippines has added usefully to the stock of knowledge and understanding of participatory approaches to shifting cultivation, and agro- and community forestry.

iv. institutional innovation. The Foundation has been instrumental in institutional innovation to support work on CPRs. Three examples are the Uplands Working Group in the Philippines, a body chaired by a senior Bureau of Forest Development Officer, including members from Government, University and concerned research institutions, and bringing together sociologists, lawyers, anthropologists, social science academics

and foresters; the Ranchi Consortium, a group of over ten voluntary agencies working on social and community forestry in South Bihar in India; and the Society for Promotion of Wastelands Development, an intermediary organisation with support from government, industry, and foundations, designed to have the resources and flexibility to sponsor and support initiatives for the development of degraded CPRs in India.

v. R and D and trials for livelihood-intensive technology. The Indian work on producer gas for irrigation pumping is one example linking CPR trees as the source of energy with new technology for irrigation pumping.[1] The exploration of nutrient film technique for the settlement of the CPRs of the new lands in Egypt is another.

Three Priorities

If livelihood-intensity is accepted as a prime criterion for resource management and use, and given a. the very large numbers of rural people to be accommodated, b. the importance of CPRs to many of the rural poor, and c. the relative neglect of CPRs compared with PPRs, the Foundation with its flexibility, experience, and independence of market forces, would appear to have a comparative advantage in this field.

---

1. See Deep Joshi, David Seckler and B. C. Jain, Social Forestry, Wood Gasifiers and Lift Irrigation: Synergistic Relations Between Technology and Natural Resources in Rural India, The Ford Foundation, New Delhi, January 1983.

Foundation actions as proposed below should have a high degree of additionality, since many of them would otherwise not be carried out. But with additionality goes risk and the need to tolerate failures, since other funding bodies will usually support the safer and more conventional initiatives.

Ideally, suggestions for the Foundation should be based on a comprehensive review of what other organisations are doing or purpose. In the absence of such a review, my supposition is that what they do or propose to do will cover the more obvious, less interdisciplinary, less innovative, and less participatory actions, less directly related to the interests of the poor and more or less on current lines. I shall argue that the search by the Foundation, in contrast, should be elsewhere, and that it should include three thrusts: first, in the difficult area of community and group management of CPRs; second in developing viable livelihood-intensive approaches through settling families on CPR land with private rights; and third, in the gaps left unilluminated and unexplored by conventional disciplinary, professional and organisational concerns.

i. <u>community and group management of CPRs.</u>

More hard experience and hard-headed analysis is needed of the extent to which communities and groups can or should manage CPRs,

and of conditions for failure and success. The worldwide emphasis on participation has on the whole had a good effect. Participation is, however, perhaps best regarded as a means, not an end in itself except to the extent that those who participate value it and need it. Often, it seems, they do; sometimes, though, they do not.

Which times are which may depend partly on the phase of evolution of a management system for CPRs. While evolving a management system, the evidence is strong, not least from work in the Philippines, that a participatory approach, is both vital and efficient. But after the evolutionary phase, for the day-to-day management of CPRs, a participatory approach with full community or group management may or may not be needed, and may or may not be what people want. With large-scale CPRs, all may wish for and welcome management by an external agency which, however, may be ultimately answerable to the community. In contrast, members of a small community or group may be able and may wish to manage small-scale CPRs themselves. There may still, however, be a case for an external monitoring and arbitrating agency, especially where questions of equity of access are involved. And when revolutionary principles of equity are established, as with water rights for all including the landless at Sukhomajri or with irrigation based on family size as with the Gram Gourav Pratisthan in India, their stability may depend on an external agency, at least for the first several years.

These are not easy questions and much remains to be learned. The involvement of staff in the Philippines, with Sukhomajri and its sequel in India, and no doubt elsewhere, has given the Foundation a comparative advantage in contributing creatively to the debate and in developing practice and understanding. The case seems strong for staying close to the action, gaining more experience, and through partnership promoting and supporting further experimentation, analysis and practical prescription in this field.

ii. management by families

The allocation of CPRs to families may often present the most practical though neglected approach, and the one people themselves most appreciate. There is a view, usually held by people who do not have to practice what they preach, that collective sharing and management are inherently superior to private ownership and management. Against that view, it can be argued first, that the family is itself a small collective, and second, that private property under their control seems to be what poor rural people all over the world really want. The collectivism of Ujamaa in Tanzania never took off. Only with the kibbutzim and a scattering of institutions with voluntary members and exceptional idological commitment, does collective agriculture do at all well. Putting the wishes of the poor first indicates priority to

the search for the last of the four approaches to management of CPRs (after the free-for-all, public management, and community management), namely management by the family. Sometimes, this will be physically impossible, as with some extensive pastoralism in arid lands. But on forest land, and land marginal for cultivation with current technology, the medium-term potential may be considerable.

Some of the resistance to this approach may be based on the belief and perhaps the reality that with the current state of knowledge, a viable stable and productive small-farming system does not exist for such conditions. If so, this may be because to test multiple innovations with the long gestation periods for trees to grow has not been in the private interests of farmers and has been beyond the wit, will and resources of scientists. As population to land ratios change, new systems rational for farmers may be latent but not yet adopted. Experimental attempts to develop such systems deserve support. One implication is a quite different view of public CPRs of forest, which can be seen as areas better protected through stable human settlement than through commercial exploitation.

Whether the potential here can be realised will depend on the development of viable farming systems, including stable and productive agro-forestry alternatives to shifting cultivation, and stable and productive silvi-pastoral alternatives to communal grazing.

iii. gaps as opportunities

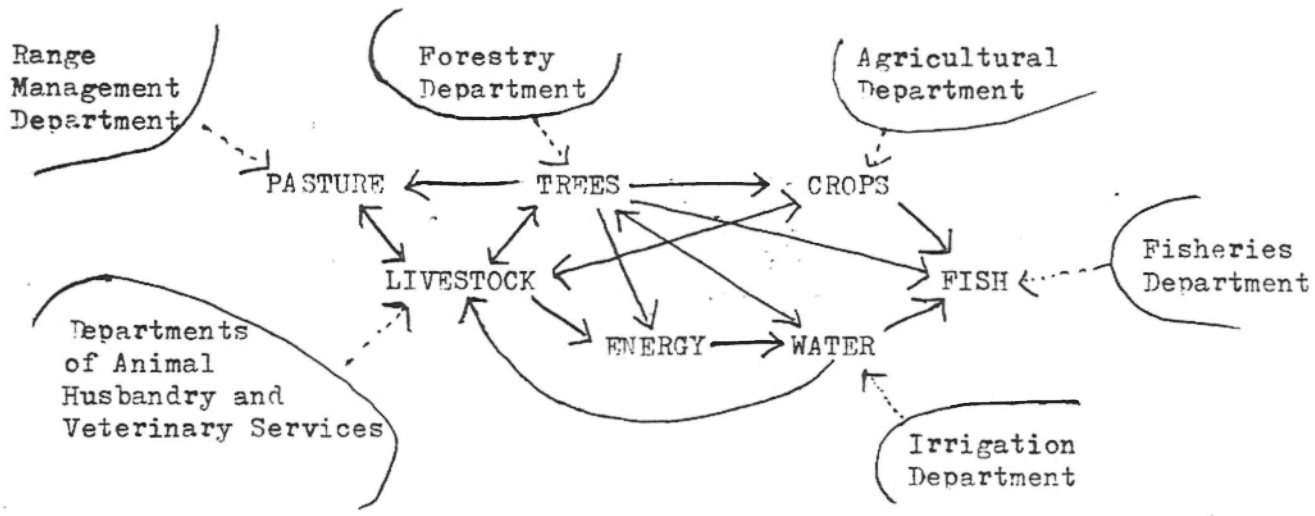
University faculties and departments, government ministries and departments, rural development programmes, and rural R and D, are clustered and channelled along main lines - Faculties of Agriculture, Ministries of Agriculture and crop research; Faculties of Veterinary Science, Ministries of Animal Husbandry, and livestock research; and much the same with Forestry and Fisheries. With their built-in elitist biases, these have developed innovations mainly of benefit to the better off and the commercial sector, and quite largely captured by them. Their R and D has been concentrated both on disciplinary lines and on PPRs.

The gaps left between these specialised channels or ruts present opportunities for the poor, both from neglected CPRs and their management, and from the various interactions between trees, crops, pasture, livestock, energy, water and fish, which have been underresearched, especially those linking trees with crops, pasture, livestock, fish, and energy. Energy stands out as an orphan, without a parent discipline, profession or government department[1], underlining the as yet underdeveloped and unappropriated livelihoods which it promises.

---

1. Ministries and Departments of Energy exist, but are generally concerned with macro-issues, not with micro interactions.

Departments, Interactions and Gaps



(The gaps are represented by most of the lines in the centre of the diagram, especially those involving trees and including tree to crop interactions)

There is scope here for bypassing the politically improbable redistribution of resources from the richer to the poorer. Instead, with energy and with these underdeveloped interactions, the opportunity is for poorer people to gain new livelihoods in the neglected gaps.

In the energy field, one example which has not yet been introduced and its benefits not yet appropriated is wood-based producer gas for locomotion. This has been known since at least the 1930s, and in India, Australia, Sweden, the UK and elsewhere vehicles ran on producer gas during the second world war. Zambia imports all its oil and has a

chronic balance of payments crisis, a vast endowment of CPR wood, and a population of many desperately poor rural people, especially women and female-headed households. If transport in rural areas were based on producer gas, poor people might bring wood to the roadside and sell it to passing vehicles, gaining income for themselves and saving foreign exchange. Conversion of rural transport systems to producer gas is overlooked because it is an 'old' technology, and because the environmental scare treats demand for wood as a problem, not an opportunity.

Spheres of Action

If these are among the mapr opportunities, there remains the final question of spheres of action by the Ford Foundation, matching the type of action to the need. Some of these would best be along current lines, for example, training and education, and support for voluntary agencies working on social and agro-forestry, and with peripheral people, especially those that help them defend their legal and moral rights to CPRs. But to sharpen the focus, four sets of actions will be proposed.

1. Research, monitoring and communication about CPRs' status and trends.

Much more hard information is needed about the status and trends with CPRs. Remote sensing is one major way forward. Another is micro-level monitoring and research including monitoring of population movements,

commercial exploitation, and who is gaining, and who losing, from change. Communication is crucial. Much more attention may be needed to ensuring that the findings of research and monitoring are brought home to policy-makers. Perhaps every grant in this field should include quite generous funds for communication, and specification of how it is to be carried out.

2. Analysis and synthesis of experience with the management of CPRs.

There is now much experience scattered round the world with the management of CPRs, some of the best resulting from involvement of Foundation staff. Comparative analysis and synthesis are overdue. Perhaps it has been done, but I have not seen it. General statements tend to be either theoretical disquisitions on the tragedy of the commons, or prescriptive extrapolations from single cases, or comparative analyses along single dimensions such as the optimal size of group for different forms of cooperation. Valid prescriptive generalisation is needed. What at present are only working hypotheses, - for example that communal management of grazing is less difficult and more stable the smaller the group; or that stability in stinting is higher where families have equal stakes in the common resource - need to be tested against further evidence. Efforts have to be made to include hidden or neglected aspects of CPR management such as the rationality and behaviour of

government staff, lawlessness, and theft, corruption, seasonality, and variations between years. A study by one or a few able and perceptive people focussed on cases and on what works and what does not work, might take us all further, and might identify more clearly the gaps in knowledge. A small action here might have a big payoff.

3. Networks.

Many professionals in the countries in which the Foundation is active are isolated. It is not just that voluntary agencies often lack technical knowledge. It is also that in new fields concerned with CPRs such as social and community forestry or the use of new priority energy technologies such as solar energy and producer gas, there is inadequate professional interchange. Professionals in the North have an advantage over their colleagues in the South in their access to information. The networks of the Agricultural Administration Unit at the Overseas Development Institute in London have shown what can be done, and have made a major contribution in fields such as irrigation management and the management of pastoral development, circulating information to hundreds of people around the world, distributing copies of good articles, and acting as free information service to members. Networks like these creatively managed, have served to accelerate understanding and to generate new practical insights. To what extent networks should be

national or international, or should start on a national basis and later become international, is a question for debate. Three subjects where in my judgement international networks might make a big contribution concerning CPRs and the transition of CPRs to PPRs are:

a. people and forests. This network would cover forest dwellers, conflicts of right and interest with commercial exploitation, shifting cultivation in forest lands, the management of forest CPRs, Forest Departments, and family settlement on forest land.

b. energy- and CPR- based rural livelihoods. This network would concentrate on old and new technology, on exploiting the energy 'gaps' to create livelihoods, and encourage an approach to rural energy from the standpoint of political economy, of who gains and who loses. It would monitor developments such as social forestry on community land, producer gas, solar pumps, etc., and encourage an R and D and diffusion approach to rural energy to benefit the poor. It would pay special attention to women and energy, and to energy-related activities to fill in seasonal gaps in livelihoods. A major concern would be the use of CPRs for energy plantations to generate livelihoods for the landless and very small farmers.

c. livelihood-intensive farming systems[1]. This network would approach farming systems from the standpoint of the year-round livelihood of the farm family and its members. It would be especially concerned with diagnostic methodology, synergistic interactions, the spread of productive labour activities round the year, and risk reduction and sustainability for small farmers in marginal and fragile CPR environments. It would identify and publicise promising new approaches and encourage their testing in different environments.

4. Creative people and institutions

These three proposals all look fairly straightforward in grant-making terms. They are all, I think, important. But the most important sphere is the development of rural technology and management combinations for community and group management of CPRs, for family farming systems for fragile and marginal CPR environments, and for the exploitation of gaps. To develop these requires the identification, strengthening, support and encouragement of creative people and institutions. The qualities and conditions sought are exceptional and not easily found.

The creative people needed will have some at least of these qualities: professional competence, commitment to the poor, originality and lateral- and cross-disciplinary thinking, practicality, willingness to

1. This overlaps with the concerns of the farming systems paper, but it applies critically to family settlement on CPRs.

learn from and with small farmers and the landless, and an approach which is participatory not authoritarian, and concerned with evolutionary processes rather than rigid blueprints. There are not many people in the world who score high on all these points.

But creative people may be easier to identify than institutions which are both creative and have the necessary professional competence. There are hierarchical, discipline-oriented institutions, out of touch with the rural poor, but with competent professionals trapped in them. There are flexible and original voluntary agencies working with the rural poor but lacking in specialised professional competence. There are communities and creative farmers who lack scientific insights of the modern kind, but who know much about their environments and who are willing to innovate and experiment.

To bring these various people and groups together, in order to realise more of the potential of CPRs for the poor, may need some new institutions. But first one should look at what already exists. Candidate institutions include private research institutes, breakaway research groups, intermediary organisations, and some voluntary agencies. There are also a few specialised research institutions already mandated to work on 'gap' subjects. One such is ICRAF, the International Council for Agro-forestry in Nairobi, working mainly on tree and crop interactions. It has only 12 professionals, and perhaps for that reason is concentrating

on the development of diagnostic methodology and its diffusion for use by others. With the other types of institution, the Foundation can help through professional interaction, through support which increases flexibility, and through encouraging and enabling individuals and groups - especially scientists, farmers, and voluntary agency staff who might not otherwise meet - to come together in a productive manner. The experience with Sukhomajri in India and with work in the Philippines suggests that the role of Foundation staff as allies, catalysts, and partners can be critical for progress. In general, it seems to me, the more difficult and complex the task, and the less well fitted existing organisations are for tackling it, so the more important the participation of Foundation staff becomes.

Finally, the difficulty and risks must not be minimised. It is not easy to bring together rural people, voluntary agency staff, natural scientists, and social scientists so that they can pool their knowledge and ideas and evolve new approaches. Nor is it easy to escape from the straitjacket of conventional research methodology in any discipline. Hard and sober science helps. Yet I would argue that unconventional shortcuts are vital if progress is to be made, and that well-informed but intuitive leaps may often be the best way forward. Part of the reasoning is based on the proposition that the more intractable and difficult a social situation (management of community CPRs) and the more difficult

a physical and biological environment (steep forest with unstable soils, savanna with rainfall marginal for agriculture, etc.), so the more variables have to be manipulated correctly and simultaneously for stable gains. To take agricultural research as an example, in a favourable environment a research station approach, experimenting with one or two variables, say spacing and time of planting, may pay dividends for farmers. But big gains in a hostile and marginal environment, may require simultaneous introduction not just of new spacing and time of planting, but also of contour ploughing to increase infiltration, tree legume intercropping for shade, nitrogen-fixing and micro-climatic effects, mulching, and fodder for livestock which turn produce manure. Similarly with communities faced with intractable problems of CPR management, simultaneous innovations are likely to be needed both in physical and biological technology, and in social organisation, management and discipline. Development with the poor of the remaining CPRs is thus more difficult and more risky than the easier development of the more favourable environments which are now PPRs. Some starts have been made with the sensitive action research which is needed with communities, small farmers, and the landless if the potential of the CPRs for the poor is to be realised, but major gains have been elusive. Is this because they are not there to be made, or is it because of a lack of human will and ingenuity? Is it worth a determined attempt to find out?

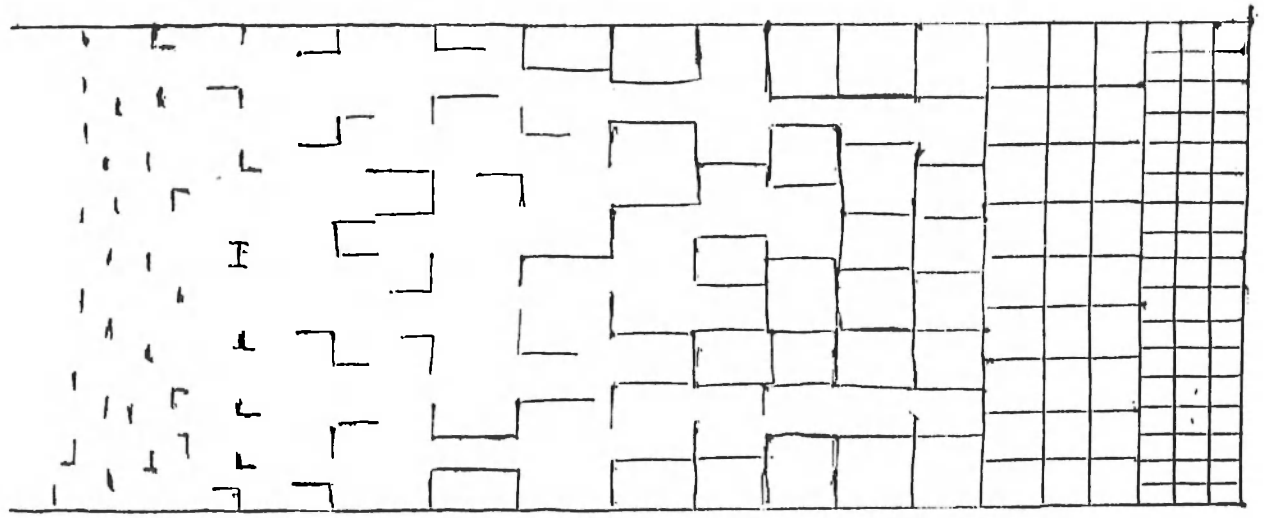
Robert Chambers
New Delhi

March 25, 1983

Session on Rural Community Development

Chart illustrating uses of blueprint and greenhouse approaches

low — degree of abstraction, systematization and universalization — high



Blueprint stresses
- manipulation
- prediction
- replication
- largescale application

Greenhouse stresses
- spontaneity
- creativity
- organic growth
- smallscale application

Africa

Bp applied since independence with little regard for its suitability to prevailing circumstances.

Gh increasingly seen as alternative approach to get both growth and equity issues more effectively tackled.

Asia/Latin America

Bp applied with great vigor in last few decades in order to modernize and industrialize

Gh growing stronger as a result of inability to cope with equity issues through Bp.

U.S./Europe

Bp prevailing and exported to other parts of the globe through business and aid.

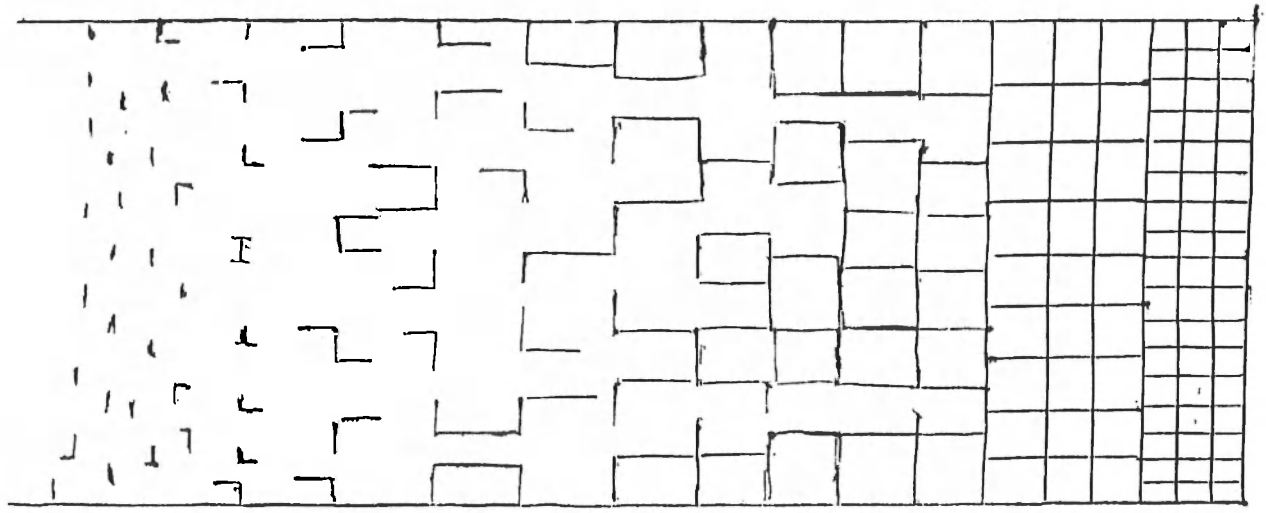
Gh growing stronger as a result of alienation caused by overuse of Bp.

GH-5/17

Session on Rural Community Development

Chart illustrating uses of blueprint and greenhouse approaches

low — degree of abstraction, systematization and universalization — high



Blueprint stresses
- manipulation
- prediction
- replication
- largescale application

Greenhouse stresses
- spontaneity
- creativity
- organic growth
- smallscale application

Africa

Bp applied since independence with little regard for its suitability to prevailing circumstances.

Gh increasingly seen as alternative approach to get both growth and equity issues more effectively tackled.

Asia/Latin America

Bp applied with great vigor in last few decades in order to modernize and industrialize

Gh growing stronger as a result of inability to cope with equity issues through Bp.

U.S./Europe

Bp prevailing and exported to other parts of the globe through business and aid.

Gh growing stronger as a result of alienation caused by over-use of Bp.

GH - 5/9/83